

Fig. 1A

```

Human_p53 MEEPQSDPSVEPPLSQEYFSDWKLPPENNV-----LSP--LPSQAMD
Xen_p53 ME-PSSETGMDPPLSQEYFSDWKLPP-D-----PQTQVT
Squid_p53 MSQGT-----PNSQEFNLWDSQVTANEYTOIHERGVGYEHEAPDQTSIEISA
CPB_p53 MS-SQSD-----FLPPDVONFLAEHGD-----NDNLN
Trib_p53A MS-QQS-----QFSIIIPDVDFEDH-----GKDDV
Trib_p53B -----V
Helio_p53 -----V
Dr_s_p53 MYISQP-----MSWHKEETDSEDDSTVDIK-----EDPKTV
c ns nsus m qs et l le
Human_p53 DMLSEDDI---EQWFTEDPGPDEAPRMEANPRV-----APAPAAPAPAPAPASW
Xen_p53 CRNDLS-----EPDYLADMT-----VLQEGLMGNAVPTVT---
Squid_p53 YRLAQDPYGRSESYDLLNPIINQIPAPMPIADTONNPLVNHCPYEDMPVSTPYSPHDH
CPB_p53 FFKDEPT-----LNDLNSINLNG-----SIVANDDKMVHLDFPG-
Trib_p53A GRGMHEN-----NVHLVNDGGE-----EEKYSNEANYTESHFPP-
Trib_p53B RQYKPED-----FSHTFHPIICSIFQLEDKFNINQSXYLSAPFPFP-
eli_p53 -----
Dros_p53 EVSGSELT-----TEMAFLQGLNSGN-----LMQFSQQSVLREMILQDI
c nsensus m p a t v p
Human_p53 PL--SSVPSQKTYQSGYGERGFLH-SGTAKSVCTYSPALNKMCCQAKTKCPVLWVD
Xeno_p53 ---SCAVSTDYAGKYGLQDFDQ-NGTAKSVCTYSPALNKMCCQAKTKCPVLVRVE
Squid_p53 VQSPSPVPSNIXYGEVVEFMSQPSKETSTYSEKLDKVRMTTCPCVRFKTA
CPB_p53 ---VQTSVPSNDYDGPYEFEDVHP--TVAKNSWVSTTLNKVMTGSPFPVDFRVS
Trib_p53A ---DQANLGTETPGPNEFSVISP--NEQKSPMEYSEKLNKIGINVKFPVAFSVQ
Trib_p53B ---SEPLELCNTEYPGPLNEFVDP--NVLKNPMEYSPILNKIIDMKHKEPINFVUK
Helio_p53 QIQANTLPKLENHNIGGYCESMVEDE---PPKSLIMYSIPLNKIYTRMNAKAFNVVDQFK
Dr_s_p53 q svpsq dy g y f l v k tw ys lnkmyv ma fpv f v
consensus
Human_p53 STPP-PGTRVRAMAKKQSQHMTETVRRCPHERCSD-----SDGLAPPQHIIIRVEGNLR
Xeno_p53 SPPP-RGSIIRATAVKKSEHVAEIVKRCPPHERSVEP---GDAAPPSSHIRVEGNLQ
Squid_p53 RPPP-SGQIRAMPETAMKPEHVOEWKRCPNHATAKEH---NEKHAPPLHIVRCEHKL-
CPB_p53 HRPF-NPITRSTPVSAPQFAQECVYRCINHEFSHKEG-DGDLKEHHRPHIIRCANQYA
Trib_p53A NRQONLPKIRATPVLSQTHFODVHRCVGRHHPDQS-NKGVAPHFQHIIRCTNDAA
Trib_p53B KADERRLVVRVMPLEEDRYVOELVHRCVGRHHPDQS-NKGVAPHFQHIIRCTNDAA
Helio_p53 YQKA-PHMYRSTVVSDETQAEKRVRCVGRHHPDQS-NKGVAPHFQHIIRCTNDAA
Dros_p53 SKMFIQPNIRVFLCESND--VSAPVRCQNELSVEPLT---ANNAKMRESERSENPNs
c nsensus pp lfvratpvs hvqev RCLnHe d s d i hiiRcennna
Human_p53 MEYLDNRNT---FHSVUVPEP-----PEVGSQCTIHYNNACNSCMG-GMNRRLPILTI
Xen_p53 AYIMEDVNS---GRHSVCVPYEG-----POVGECTAVLVNACNSCMG-GMNRRLPILTI
Squid_p53 AKYHEDKYS---GRQSVLPHEM-----PQAGSEWVNVLYQFCLGSCMG-GPNRRPIQYV
CPB_p53 AVLGDKSKN---ERLSVLPFGI-----PQCTESVREIEEFYCKNSCSPGMNRRARVEI
Trib_p53A EYVGDKNKG---ERLNVPLAH-----PQGEVVKVEFAQFCKNSCPL-GMNRRLPIDNV
Trib_p53B QVGGKNTAG---KRLS-----
H li_p53 MYICGVDM---ADSWYVLVEF-----MRTSESCHAYQFCKNSCAT-GENRRALIAFI
Dros_p53 VYCENAQCGKISERFESVWELNMSRVSRTGLTRQLAKENCONSCIG---RRTSIVV
consensus vvygdk r svvp e pq gse t ynfmc nscmg gmnrrpi li

```

Fig. 1B

```

Human_p53  I T T E D S S G N T G R N S P E V V C A C P G R D R R T E E N L R K K G --- E P H H E L P P G S T K R A L P
Xeno_p53   I T L E T P Q S L G R R C F E V V C A C P G R D R T E D N Y T K K --- R G L K P S G --- K R E L A
Squid_p53  F T L A E K - D N Q V G R A M E V V C A C P G R D R K A D E A S L V S K --- P P S P K K N G F P Q R S L V
CPB_p53    F T L E D N Q G T T Y G R K T E N V A I C S C P K R D E K D E D O N T A N T --- N L P H G - K R K K M E
Trib_p53A  F T L E D N K G E Y F G R I M G V A M C S C P K R D K D E K - D M E S A --- V P P R R R K R K K I G
Trib_p53B  F T L E D A M G N H G R Q V M G A R ---
Helio_p53  F C L E K A C D A V S Q H V E V V I C T C E K R D I O D E R Q L N S K R K S V P E A A E E D E P S K V R C H A
Dros_p53   f t l d g l l g r v v i v c c p r d r e e k k
consensus f t l d g l l g r v v i v c c p r d r e e k k p g k r l

Human_p53  N N T S S P - Q P K K --- K P L D G E Y F T Q C R G R E R E F R E N E A T E L K D A Q A G ---
Xen_p53    H P P S E P P L P A R L V V D D D E I F T K K S R E M E I K K I N D A T E L Q S D D Q ---
Squid_p53  L T N D I T K I T P K K --- R K I D D E C F T A V G R E N E T L C K E R D I M E L A A R P E A E R L L Y K Q E
CPB_p53    K P S K K M Q T Q A E --- N D T K E F T L P P V G R H N E Q N V L K Y C H D I M A G E I I R N ---
Trib_p53A  N D E R R V V P Q G S S --- D N K I F A L N E H P E K N N L Q A L K C Q D L A M D I K K Q ---
Trib_p53B  ---
Helio_p53  ---
Dros_p53   I K T E D T E S N D S D C D D S A A E V N V S R T P D G D Y R L A E T C P N K E W L Q S I E G M I K ---
c nsensus k e t l i g r f m k l e l d l

Human_p53  - K E P G C --- S R A H S S H L K K K G Q --- S T S R H K K M F K T E G P S D ---
Xen_p53    - K V T I K --- C R X C R D E I P K K G --- K K A V K D E Q P S E ---
Squid_p53  R Q A P I C R L T S P S S N G S Q D G S R S T A F S T S D S S Q V N S S Q N N T Q M A N G Q V P H E E T P V T
CPB_p53    - I G --- N G T E G P V I A L N --- K E N T L I R S S E ---
Trib_p53A  - E Q G --- G D - D S A D I N C Y N --- E I T V I I N G T A A F D ---
Trib_p53B  ---
Helio_p53  ---
Dros_p53   - E A A E V L N P N Q E N I P R H A N --- K L S E K K R A Y L P ---
consensus g k l m v d

Human_p53  ---
Xeno_p53   ---
Squid_p53  K C E P T E N T I A Q W L T K I G L Q A Y I D N F O Q K G L H N M F Q L D E F T L E D L Q S M R I G T G H R N K I W K S
CPB_p53    ---
Trib_p53A  ---
Trib_p53B  ---
Helio_p53  ---
Dros_p53   ---
consensus  ---

Human_p53  ---
Xeno_p53   ---
Squid_p53  L L D Y H R L L S S G T E S Q A L Q H A A S N A S T L S V G S Q N S Y C P G F Y E V T R Y T K H T I S Y L
CPB_p53    ---
Trib_p53A  ---
Trib_p53B  ---
Helio_p53  ---
Dros_p53   ---
consensus  ---

```